

28 Feb 1991

PJMNN-B  
METER, PHASE JITTER

**1. GENERAL.** This procurement requires a phase jitter meter designed to meet IEEE Std 743-1984 specifications.

**2. CLASSIFICATION.** Type II, Class 5, Style E, and Color R in accordance with MIL-T-28800 for shipboard applications.

**3. OPERATIONAL REQUIREMENTS.** The equipment shall measure and indicate phase jitter on voiceband transmissions within the following minimum specifications.

**3.1 Input characteristics.**

**3.1.1 Input frequency range.** 990 Hz to 1,030 Hz.

**3.1.2 Input signal level.** -40 dbm to +10 dBm.

**3.1.3 Input impedance.** 600 ohms and 900 ohms nominal.

**3.2 Output characteristics.**

**3.2.1 Output frequency.** Shall be between 1002 Hz and 1020 Hz.

**3.2.2 Output signal level.** -40 dBm to 0 dBm.

**3.2.3 Output impedance.** 600 ohms nominal.

**3.3 Displays.** Peak-to-peak phase jitter, input level, output level, and input frequency.

**3.3.1 Phase jitter indication.** 0° to 30°. Accuracy:  $\pm 5\%$  of indication  $\pm 0.2^\circ$  or less.

**3.3.2 Input and output level indication.** -20 dBm to 0 dBm within 1 dB.

**3.3.3 Frequency indication range.** 990 Hz to 1,030 Hz.

**3.4 Phase and amplitude hits.** The equipment shall detect and totalize phase and amplitude transients that exceed preset thresholds for 4 ms.

**3.4.1 Phase hit threshold.** Selectable from 5° to 45° in 5° steps. Accuracy:  $\pm 10\%$  of setting  $\pm 0.5^\circ$  or less.

**3.4.2 Amplitude hit threshold.** Settings of  $\pm 1$ , 2, 3, and 6 dB shall be provided. Accuracy:  $\pm 0.5$  dB.

**3.4.3 Timer.** Continuous and up to 15 minutes timed.

**3.5 Weighting characteristics.** The equipment shall be provided with filters that allow measurement of jitter frequencies from 20 Hz to 300 Hz in accordance with IEEE Std 743-1984.

**4. GENERAL REQUIREMENTS.**

**4.1 Power source.** MIL-T-28800 nominal power source requirements are invoked. Operation at 400 Hz

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is not required. Maximum power consumption: 50W.

**4.2 Weight.** 20 kg (44 lb) maximum.

**4.3 Lithium batteries.** Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.